

## **REMARKS**

### **Status of the Claims**

Claims 1-18 are pending in the instant application. Claims 9-16 have been withdrawn based on Applicant's response to the Requirement for Restriction dated 10/28/2008. Claims 1-8, 17 and 18 are currently being examined on the merits.

### **New Claim Rejections (Necessitated by Amendment)**

#### **Claim Rejections - 35 USC § 103**

Claims 1-8, 17 and 18 are rejected under 35 U.S.C. §103(a) as being unpatentable over the combination of KOBAYASHI (EP 750,899) and CHAUDHRY (6,051,245).

The Examiner's notes that the Applicants claim:

- An inverse emulsion consisting essentially of the product of mixing an aqueous phase and an oil phase, wherein: (A) the weight ratio of the aqueous phase to the oil phase is from 4: 1 to 2:1, (B) the inverse emulsion includes a crosslinker comprising a compound containing two or more ethylenic groups, and (C) the inverse emulsion contains from 20% to 70% by weight of an anionic polymer obtained by inverse emulsion polymerization of: (i) one or more anionic acrylic monomers dissolved in the aqueous phase, and (ii) a least one hydrophobic acrylic monomer dissolved in the oil phase, and wherein (a) the at least one or more anionic acrylic monomers contains a strongly acidic functional group, and (b) the concentration of the at least one hydrophobic acrylic monomer is from 0.1 to 5 weight percent of the total weight of the one or more anionic acrylic monomers;
- That the anionic acrylic monomer containing a strongly acidic functional group is 2-acrylamido-2-methylpropnesulfonic acid and/or its sodium salt;
- That the hydrophobic acrylic monomer is an ester of acrylic or methacrylic acid with C4-C20 linear or branched monofunctional alcohols;

- That the hydrophobic acrylic monomer is stearyl methacrylate or n –butyl methacrylate; and
- That the crosslinker is methylene-bis-acrylamide and is present in an amount of 0.01 % to 1 % based on the total weight of the monomers.

It is the Examiner's position that KOBAYASHI teaches an emulsified composition and an emulsified cosmetic with a good stability and usability can be provided by using an emulsifier consisting of a water soluble crosslinked amphiphilic polyelectrolyte obtained by copolymerization of (meth)acrylamido alkylsulfonic acid and N substituted (meth)acrylamide or (meth)acrylate (abstract). KOBAYASHI teaches the methacrylate monomers present in an amount of more than 1 wt. % are, for example, lauryl methacrylate, stearyl acrylate, stearyl methacrylate (p. 4, lines 32-50). The Examiner further states that KOBAYASHI discloses the anionic acrylic polymer containing (i) the anionic acrylic monomers 2-acrylamido-2-methylpropanesulfonic acid, (ii) the hydrophobic acrylic monomer lauryl methacrylate (3.63 wt. %), and (iii) the crosslinker methylene-bis-acrylamide (0.37 wt. %) (p. 7, [Synthesis example 12]).

The Examiner concedes that KOBAYASHI does not expressly teach an inverse emulsion comprising the claimed polymer species. The Examiner cites CHAUDHRY as teaching this element of the claims.

The Examiner states that CHAUDHRY teaches thickeners for products for topical application such as personal care products for application to the skin or hair (title, abstract) and that CHAUDHRY further teaches the polymeric material comprises monomer units derived from (i) acrylamide; (ii) 2-acrylamido-2-methylpropanesulfonic acid (AMPS); and (iii) a polyfunctional monomer (abstract). It is the Examiner's position that CHAUDHRY further teaches a significant advantage for the personal care products and pharmaceuticals industry would be to provide a polymer composition which would serve both as a thickener and as a

stabilizer and be in liquid form to enable easy handling by automatic dispensers (1:45-50).

The Examiner notes that CHAUDHRY teaches "Surprisingly, we have found that it is possible, by the present invention and using the well known inverse polymerization technique, to produce polymers that function as both thickeners and stabilizers" (1 :54-57).

The Examiner continues by noting that CHAUDHRY teaches that the water in oil emulsion may be prepared by a method comprising forming a water in oil emulsion of the monomer composition in which the total monomer concentration by weight of the water in oil emulsion is at least 30 weight percent (3:23-38). CHAUDHRY further teaches the polymer solids content of the water-in-oil emulsion incorporated into the personal care product is preferably 35-60% by weight of the total weight of the emulsion (4:35-39); and that the compositions embodying the invention may be prepared by incorporating the water in oil emulsion into the remaining components, whereupon the emulsion "inverts" to provide a continuous liquid phase comprising the aqueous medium of the emulsion and any liquid in the composition comprising water or miscible with water (4:40-45). Finally, the Examiner notes that CHAUDHRY further discloses the example of an oil in water cream comprising approximately 71 percent by weight water (Example 5; 8:1-18).

Finally, the Examiner cautions that in regard to the process steps of claim 1, "Even though product-by process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." See MPEP § 2113.

The Examiner concludes that It would have been prima facie obvious to one of ordinary skill in the art at the time the claimed invention was made to combine CHAUDHRY with KOBAYASHI because KOBAYASHI teaches similar anionic polymer emulsifier compositions and CHAUDHRY teaches a cosmetic composition comprising a polymer thickener. The basis for the Examiner's conclusion is that one skilled in the art would have been motivated to combine CHAUDHRY with KOBAYASHI because it is generally considered to be prima facie obvious to combine compositions, each of which is taught by the prior art to be useful for the same purpose, in order to form a composition that is to be used for an identical purpose. The Examiner further states that the motivation for combining them flows from their having been used individually in the prior art, and from the being recognized in the prior art as useful for the same purpose. It is the Examiner's position that the instant claims are no more than the combination of conventional components of cosmetic polymer thickener compositions

The Examiner further reasons that it is apparent that one of ordinary skill in the art would have had a reasonable expectation of success in producing the claimed invention because KOBAYASHI provides an synthesis example of making the polymer, and making the inverse emulsion would have involved no more than routine laboratory work within the skill of a person having ordinary skill in the art; and thus the invention as a whole would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made.

**The Applicants respectfully request the Examiner to reconsider the rejections.** In the present application, the polymerization method used to prepare the anionic acrylic polymers of the application (inverse emulsion polymerization) is important. Kobayashi reports that: "For the polymerization method of the copolymer, prior art polymerization methods such as the solution polymerization method, bulk polymerization method and precipitation polymerization method can be used." In Kobayashi no mention is made of inverse emulsion polymerization. Even if CHAUDHRY does teach that "by the present invention and using the well

known inverse polymerization technique, to produce polymers that function both as thickeners and stabilizers", it is not obvious to combine the teaching of CHAUDHRY to an acrylic polymer comprising a hydrophobic monomer. One of ordinary skill in the art **well knows** that inverse emulsion polymerization in general (and in CHAUDHRY too) is used to prepare polymers from hydrophilic monomers. The hydrophilic monomers are dissolved in the aqueous phase which is emulsified with the oil phase where the polymerization reaction takes place in the aqueous droplets that make up "mini-reactors" that contain monomers and initiators. The monomers of CHAUDHRY are all water soluble.

In the Claims of the present application, one of the monomer is hydrophobic and cannot be dissolved in the aqueous phase of the inverse emulsion, which is the discontinuous phase. In spite of the fact that this hydrophobic monomer is not dissolved in the "mini-reactors", but in the oily continuous phase, **the polymerization still takes place** and provides efficient thickeners that useful to prepare stable cosmetic formulations. It follows then, that the pending claims are not obvious in view of the Examiner's references.

The Applicants acknowledge the prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following non-patent literature documents are cited for applicant's consideration: Kobayashi, Atsushi.

### **CONCLUSION**

For all the foregoing reasons, the Applicants submit that the application is in a condition for allowance. If for any reason the Examiner finds the application other than in condition for allowance, the Examiner is requested to call the undersigned at 281-404-4850 to discuss the steps necessary for placing the application in condition for allowance. . The Commissioner is hereby authorized to charge any fees associated with this communication or credit any overpayment to Deposit Account No. 50-4920 (LSP-1012).

Respectfully submitted,

/Gene L. Tyler/

Gene L. Tyler  
Registration No. 35,395  
Mossman, Kumar & Tyler  
P.O. Box 42139  
Houston, Texas 77242  
Telephone: 281-404-4859  
Facsimile: 281-404-4468

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